

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 May 2005 (06.05.2005)

PCT

(10) International Publication Number  
**WO 2005/039632 A1**

(51) International Patent Classification<sup>7</sup>: **A61K 39/00**,  
C07K 14/47, C12N 15/12, 5/10, C07K 16/30, G01N  
33/574

(74) Agent: LORD, Hilton, David; Marks & Clerk, 57-60 Lin-  
coln's Inn Fields, London WC2A 3LS (GB).

(21) International Application Number:  
PCT/EP2004/012087

(22) International Filing Date: 15 October 2004 (15.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/512,040 15 October 2003 (15.10.2003) US

(71) Applicants (*for all designated States except US*): IS-  
TITUTO SUPERIORE DI SANITÀ [IT/IT]; Viale  
Regina Elena, 299, I-00161 Roma (IT). NATIONAL  
INSTITUTES OF HEALTH [US/US]; 6011 Executive  
Boulevard, Suite 325, Rockville, MD 20852 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): ROBBINS, Paul,  
Frederic [US/US]; Surgery Branch, National Cancer  
Institute, 10 Center Drive, Building 10, Room 2B42,  
Bethesda, MD 20892 (US). ROSENBERG, Steven,  
Aaron [US/US]; Surgery Branch, National Cancer Insti-  
tute, 10 Center Drive, Building 10, Room 2B42, Bethesda,  
MD 20892 (US). MACCALLI, Cristina [IT/IT]; Section  
of Genetics and Biology of Animal Viruses, Laboratory of  
Virology, Istituto Superiore di Sanita, V.le Regina Elena,  
n. 299, I-00161 Rome (IT).

(81) Designated States (*unless otherwise indicated, for every  
kind of national protection available*): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (*unless otherwise indicated, for every  
kind of regional protection available*): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*



WO 2005/039632 A1

(54) Title: COLORECTAL CANCER ANTIGEN

(57) Abstract: A point mutation at position 399 in a commonly expressed gene, designated as COA-1 herein, is diagnostic of col-  
orectal cancer and is capable of eliciting at all mediated immune response.